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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,088	10/31/2003	Naoto Kawamura	200207667-1	1012

22879 7590 11/14/2005

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EXAMINER

DICHT, RACHEL S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/698,088		KAWAMURA ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Rachel Dicht		2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 1-13, 16-25, 33 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14, 15 and 26-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Response to Amendment***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by Drogo et al. (US Pat. No. 5,528,269).

Drogo et al. teaches a print cartridge comprising a housing (16, Fig. 1) mechanically interoperable with printing systems of a plurality of printing system families; means for ejecting fluid (17, Fig. 2) disposed on the housing; and means for electrically coupling (18, Fig. 2) to a printing system, the means for electrically coupling including means for permitting detection of installation of the print cartridge and means for permitting operation of the means for ejecting fluid, wherein the means for permitting detection of installation of the print cartridge

comprises means for sensing a temperature of the print cartridge (refer to column 2 lines 38-42 and 46-49).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Drogo et al. (US Pat. No. 5,528,269) in view of Buskirk et al. (US Pat. No. 4,872,027).

The device of Drogo et al. DIFFERS from claim 15 in that it fails to teach a print cartridge wherein the means for permitting operation of the means for ejecting fluid comprises a plurality of uniquely positioned contact areas and the means for permitting detection of installation of the print cartridge comprises a plurality of commonly positioned contact areas.

However, Buskirk et al. teaches a print cartridge wherein the means for permitting operation of the means for ejecting fluid comprises a plurality of uniquely positioned contact areas (Fig. 5) and means for permitting detection of installation of the print cartridge comprises a plurality of commonly positioned contact areas (I1 and I2, Fig. 6).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Drogo et al. to incorporate a plurality of uniquely position contact areas and commonly positioned contact areas as taught by Buskirk et al. for the purpose of assuring reliable contact between elements.

6. Claim 26, 27, 28, 29, 30, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ujita et al. (US Pat. No. 6,170,939) in view of Buskirk et al. (US Pat. No. 4,872,027).

In regard to:

Claim 26:

Ujita et al. teaches a print cartridge comprising: a cartridge body (303, Fig. 2) having a lower portion and a vertical wall; a printhead (301, Fig. 2) coupled with the lower portion; and a contact array (square portions on printhead 301, Fig. 2 and 54) comprising a plurality of contact areas disposed on the vertical wall (227, Fig. 54), the contact array being one selected from a group comprising a first contact array (outer most contact areas of Fig. 2) that has a first layout of contact area locations, and a second contact array (inner most contact areas of Fig. 2) that has a second layout of contact area locations, wherein a portion of the contact area locations of the first layout and a portion of the contact area locations of the second layout are the same (first contact areas located closest to top of printhead 301 on both sides, Fig. 2), and another portion of the contact

area locations of the first layout and another portion of the contact area locations of the second layout are different (lower portions of contact area locations on printhead 301, Fig. 2).

It is noted, however, that Ujita et al. fails to teach a print cartridge wherein the another portion of the contact area locations of the first layout and the another portion of the contact area locations of the second layout are coupled to provide identification information for the print cartridge.

However, Buskirk et al. teaches a print cartridge wherein the another portion of the contact area locations of the first layout and the another portion of the contact area locations of the second layout are coupled to provide identification information for the print cartridge (refer to column 7 lines 28-33).

Claim 27:

Ujita et al. teaches a print cartridge wherein the another portion of the contact area locations of the first layout and the another portion of the contact area locations of the second layout include some of the same contact area locations (first two contact pads in the first row located on printhead 301, Fig. 2).

Claim 28:

Ujita et al. teaches a print cartridge wherein the another portion of the contact area locations of the first layout and the another portion of the contact area locations of the second layout do not include some of the same contact area locations (lower portions of the contact areas on printhead 301, Fig. 2).

Claim 29:

The device of Ujita et al. DIFFERS from claim 29 in that it fails to teach a print cartridge wherein the portion of the contact area locations of the first layout and the second layout is coupled to a component selected from the group consisting of temperature sense resistors, inactive contacts, and ground contacts.

However, Buskirk et al. teaches a print cartridge wherein the portion of the contact area locations of the first layout and the second layout is coupled to a component (I1 and I2, Fig. 5) selected from the group consisting of temperature sense resistors (R, Fig. 5), inactive contacts, and ground contacts (refer to column 6 line 60 to column 7 line 8, also refer to Fig. 2, where the traces 36 on the flexible circuit 35 connect pads on the head to the corresponding pads on the vertical wall).

Claim 30:

The device of Ujita et al. DIFFERS from claim 30 in that it fails to teach a print cartridge wherein first layout includes a first pair of columnar arrays of contact areas and a second pair of columnar arrays of contact areas disposed on the vertical wall, the columnar arrays of each pair converging toward each other in a direction toward the lower portion of the cartridge body.

However, Buskirk et al. teaches a print cartridge wherein first layout includes a first pair of columnar arrays of contact areas (Fig. 6) and a second pair of columnar arrays of contact areas (Fig. 6) disposed on the vertical wall, the columnar arrays of each pair converging toward each other in a direction toward the lower portion of the cartridge body (Fig. 6).

Claim 32:

Ujita et al. teaches a print cartridge wherein a number of contact areas in the portion of the first layout (outer most column of contact areas, Fig. 2) and the second layout (inner most column of contact areas, Fig. 2) are a same in number.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Ujita et al. to incorporate contact pads providing identity information as taught by Buskirk et al.

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for the purpose of determining the type of head inserted with certainty and providing the appropriate control of the head during printing (refer to column 2 lines 19-24).

7. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ujita et al. (US Pat. No. 6,170,939) in view of Childers (US Pat. No. 5,411,343).

The device of Ujita et al. DIFFERS from claim 31 in that it fails to teach a print cartridge wherein the first layout and the second layout each has a width of less than about 12 mm.

However, Childers teaches a print cartridge wherein the first layout and the second layout each has a width of less than about 12 mm (refer to column 3 lines 10-11).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Ujita et al. to incorporate a distance of less than about 12mm as taught by Childers in order to reduce the likelihood of manufacturing variations of the contact pads and ensure good engagement for the pair of contacts.

**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel Dicht whose telephone number is 571-272-8544. The examiner can normally be reached on 7:00 am - 3:30 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RSD

  
November 7, 2005

  
11/9/05  
**MANISH S. SHAH**  
**PRIMARY EXAMINER**